

92. The method according to claim 85, wherein the luminous transmittance (LT) of the glazing panel is 61.6% or less.

93. The method according to claim 85, wherein the coated glazing panel has a luminous reflectance (RL) measured with illuminant C of less than 11%.

REMARKS

This amendment is submitted in response to the Office Action of February 27, 2002 (Paper No. 5). This amendment is being filed on July 29, 2002 (Monday) and thus a two month extension of time (with fee) to July 27, 2002 (Saturday) is included. By this amendment, claims 29 through 93 are now pending.

Applicants wish to thank Examiner Markham for the many courtesies extended to Mr. Guy Farmer and Mr. Jerold Schneider, Applicants' representatives, during a personal interview on 24 July 2002.

1. The "priority" portion of the specification has been amended as requested by the Examiner. It was agreed that when comparing the instant application to the two U.S. applications referred to as being filed on June 10, 1996, there is no new matter.

2. Attached as part of the concurrently filed Information Disclosure Statement are relevant pages of Chambers's Technical Dictionary defining the term "Lehr" which were shown to and discussed with the Examiner at the interview. The Examiner indicated that this would overcome the objection to Applicants' use of this term.

3. Claims 37, 38 and 62 have been amended so as to specify the upper limit of the Sn/Sb molar ratio. Further, claim 55 has been amended to overcome the obvious typographical error (duplication of a phrase). The Examiner kindly indicated that this would overcome the objection to these claims.

4. Regarding claim 29 (from which claims 30-52 depend) and claims 45 and 69, the limitation that the glazing panel has a luminous transmittance of "less than 70%" or "less than 69%" is believed not to add new matter. These values are derived from Example 1.15 which shows a TL value of 68.8 and example 1.23 which shows a TL value of 70.2. Regarding claims 49 and 73, the limitation that the glazing panel is a "monolithic glazing panel" is not believed to add new matter. The specification explicitly discloses that "the panels according to the invention may be installed in single or multi-glazed assemblies". The Examiner concurred during the interview that a single glazing is the same as a monolithic glazing panel.

5. Regarding claims 36 and 60 and the term "low-emissivity", an extract from The Dictionary of Glass was shown to the Examiner at the Interview and a copy is attached to the Information Disclosure Statement. The Examiner agreed that this overcame objection to this term.

6. Claim rejections – 35 USC §103

During the Interview, Applicants' invention and the prior art were discussed.

Applicants have clarified the two independent claims in a manner discussed during the Interview. It is believed that the two independent claims (29 and 53) are now patentable over the art of record. The art of record, whether taken alone or in combination, does not disclose, suggest, teach or make obvious, a method of manufacturing a glazing panel including a Sb/Sn layer where the solar factor (FS) and the luminous transmittance (TL) are each less than 70%.

It is further believed that the dependent claims are each patentable over the art of record not only based on the allowability of the independent claims but additionally because each of the dependent claims when considered separately define patentable features.

Accordingly,

(a) the rejection of Claims 29-31, 37-40, 43-47, 50, 53-55, 61-64, 67-71 and 74 rejected under 35 U.S.C 103(a) as being unpatentable over Kavka (CS 239788) in view of Kalbskopf et al. (US 4,294,868) is respectfully traversed;

(b) the rejection of Claims 32-34 and 56-58 rejected under 35 U.S.C. 103(a) as being unpatentable over Kavka (CS 239788) in view of Kalbskopf et al. (US 4,294,868), and in further view of either Terneu et al. (1) (GB 2 234 264) or Porter (EP 174727) is respectfully traversed;

(c) the rejection of Claims 35-36 and 59-60 rejected under 35 U.S.C. 103(a) as being unpatentable over Kavka (CS 239788) in view of Kalbskopf et al. (US 4,294,868), and in further view of Terneu et al. (2) (GB 2 274 115) is respectfully traversed;

(d) the rejection of Claims 41-42, 48, 65-66 and 72 rejected under 35 U.S.C. 103(a) as being unpatentable over Kavka (CS 239788) in view of Kalbskopf et al. (US 4,294,868), and in further view of Terneu et al. (3) (US 4,900,634) is respectfully traversed;

(e) the rejection of Claims 49 and 73 rejected under 35 U.S.C. 103(a) as being unpatentable over Kavka (CS 239788) in view of Kalbskopf et al. (US 4,294,868), and in further view of Beaufays et al. (US 5,573,839) is respectfully traversed, and

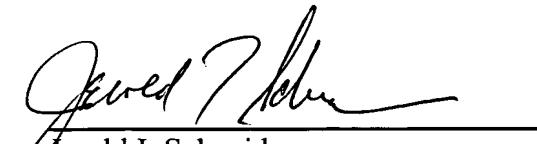
(f) the rejection of Claims 51-52 and 75-76 rejected under 35 U.S.C. 103(a) as being unpatentable over Kavka (CS 239788) in view of Kalbskopf et al. (US 4,294,868), and in further view of Toyonaga et al. (US 4,859,496) is respectfully traversed.

Applicants are willing to provide specific comments as to each claim and as to each reference. However, based in general on the discussions at the Interview, although no agreement was reached, Applicants submit that the claims as clarified define patentable subject matter.

Should the Examiner be of the opinion that additional changes to the claims would expedite the prosecution of this Application, and/or that a further personal interview would expedite the prosecution of this Application, the Examiner is encouraged to contact Applicants' attorney at the telephone number given below.

Based on the foregoing, reconsideration of all rejections and objections, and allowance of this Application, are respectfully solicited.

Respectfully submitted,



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SERIAL NO. 09/828,809
DOCKET NO.: 4004-029-30 DIV

MARKED-UP COPY OF PARAGRAPHS, AS AMENDED

**Page 1, after the heading “CROSS-REFERENCE TO RELATED APPLICATIONS”,
first full paragraph:**

[This is a division of Application Serial No. 09/170,063, filed October 3, 1998, which is a Composite Continuation of Application Serial No. 08/660,755 filed June 10, 1996 (now abandoned) and a continuation-in-part of U.S. Application No. 08/660,756 filed June 10, 1996 (now abandoned).]

This Application is a division of U.S. Application Serial No. 09/170,063 filed October 13, 1998 (now U.S. Patent No. 6,231,971) which is a continuation-in-part of U.S. Application Number 08/660,755 filed June 10, 1996 (now abandoned) and a continuation-in-part of U.S. Application No. 08/660,756 filed June 10, 1996 (now abandoned). This Application claims the priority of United Kingdom Patent Application No. 95 11 691.9 filed June 9, 1995 and United Kingdom Patent Application No. 95 14 190.9 filed July 12, 1995, and titled “A glazing panel having solar screening properties and a process for making such a panel.”, the subject matter of which is incorporated herein by reference.

Page 24, replace the paragraph starting at line 11 and ending at line 17 with the following:

The procedure of Example 1.1 was followed for further Examples 1.15 to 1.30 with variations in the reactant mixture, the color and thickness of the glass substrate, the thickness of undercoat oxide, and the ratio of Sb/Sn in the reactant mixture and in the coating. For Examples 1.15 to 1.22 the reactant mixture was MBTC and $[Cl_{1.7}Sb(OCH_2CH_3)_{1.3}]$ $C_{1.7}Sb(OCH_2CH_3)_{1.3}$ without trifluoroacetic acid whereas for Examples 1.23 to 1.30 the reactant mixture was MBTC and $C_{1.7}Sb(OCH_2CH_3)_{1.3}$ with trifluoroacetic acid. The $[F/Sn]$ Sb/Sn ratio in the reactant mixture for these examples was 0.04.

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MARKED-UP COPY OF AMENDED CLAIMS

29. (Amended) A method of manufacturing a glazing panel having a solar factor (FS) of less than 70% and a luminous transmittance (TL) of less than 70%, and being comprised of a vitreous substrate and a tin/antimony oxide coating layer provided on the vitreous substrate and having a Sb/Sn molar ratio ranging from 0.01 to 0.5, the method comprising the steps of: providing reactants in gaseous phase which comprise tin and antimony compounds, which are present in an amount effective to form the tin/antimony oxide coating layer; and forming the tin/antimony oxide coating layer pyrolytically on the vitreous substrate from the reactants in gaseous phase to provide, based on at least the Sb/Sn molar ratio and the thickness of said tin/antimony oxide coating layer, the glazing panel having a solar factor (FS) of less than 70% and a luminous transmittance (TL) of less than 70%.

37. (Amended) The method according to claim 29, wherein the tin/antimony oxide coating layer has a Sb/Sn molar ratio [of at least 0.03] ranging from 0.03 to 0.5.

38. (Amended) The method according to claim 29, wherein the tin/antimony oxide coating layer has a Sb/Sn molar ratio [of at least 0.05] ranging from 0.05 to 0.5.

53. (Amended) A method of manufacturing a glazing panel having a solar factor (FS) of less than 70% and being comprised of a vitreous substrate and a tin/antimony oxide coating

layer provided on the vitreous substrate and having a Sb/Sn molar ratio ranging from 0.03 to 0.5, the method comprising the steps of:

providing reactants in gaseous phase which comprise tin and antimony compounds, which are present in an amount effective to form the tin/antimony oxide coating layer; and forming the tin/antimony oxide coating layer pyrolytically on the vitreous substrate from the reactants in gaseous phase to provide, based on at least the Sb/Sn molar ratio and the thickness of said tin/antimony oxide coating layer, the glazing panel having a solar factor (FS) of less than 70%.

55. (Amended) The method according to claim 53, further comprising the steps of:

mixing the reagents in the gaseous phase to provide a gaseous reactant mixture;

feeding the gaseous reactant mixture to a first nozzle;

feeding superheated water vapor to a second nozzle; and

causing the gaseous reactant mixture from the first nozzle [from the first nozzle] to be brought into the presence of the superheated water vapor from the second nozzle so as to form the tin/antimony oxide coating layer on the vitreous substrate.

62. (Amended) The method according to claim 53, wherein the tin/antimony oxide coating layer has a Sb/Sn molar ratio [of at least 0.05] ranging from 0.05 to 0.5.